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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,793	01/28/2004	Steven J. Koch	1001.1760101	4006

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CROMPTON, SEAGER & TUFTE, LLC
1221 NICOLLET AVENUE
SUITE 800
MINNEAPOLIS, MN 55403-2420

EXAMINER	
EVANS, GEOFFREY S	

ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/766,793	KOCH, STEVEN J.	
	Examiner	Art Unit	
	Geoffrey S. Evans	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 20040503, 20050613.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3,5,6,15-19,23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merdan et al. in U.S. Patent Application Publication No. 2004/0004061 in view of Yamazaki et al. in U.S. Patent No. 5,856,649. Merdan et al. discloses a method of cutting a stent with a hybrid laser/water jet, which includes the steps of providing a tube, providing a hybrid jet/laser stream, impinging the stream on the tube so that it fully penetrates the tube, and moving the stream relative to the tube to from an opening of predetermined shape. Merdan et al. does not mention a lead-in path as in claims 17-23 or steps 3 and 4 of claim 1. Yamazaki et al. teaches a laser cutting method including a step of impinging a beam, along a lead-in path (see figure 6(a) path segment C5-D5). Yamazaki et al. states that a "running piercing" is performed along this path (column 5,lines 15-20). The "running piercing" appears to be the same as applicant's claimed "lead-in path". Yamazaki et al. teaches that the use of running piercing (lead-in path) shortens machining time. It would have been obvious to adapt Merdan et al. in view of Yamazaki et al. to provide this to shorten machining time.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merdan in view of Yamazaki et al. as applied to claim 1 above, and further in view of Suzuki in Japan Patent No. 56-99,091. Suzuki teaches using a slower speed for the starting

region of the machining path. It would have been obvious to adapt Merdan in view of Yamazaki et al. and Suzuki to provide this to obtain an even cutting width.

4. Claims 7,8,11,13,14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merdan et al. in view of Yamazaki et al. as applied to claim 1 above, and further in view of Flanagan in U.S. Patent No. 6,696,667. Flanagan teaches moving the workpiece relative to the laser beam for scanning (see column 4,lines 56-67). It would have been obvious to adapt Merdan et al. in view of Yamazaki et al. and Flanagan to provide this to cut a stent in multiple locations. Regarding claims 9 and 12, Merdan discloses machining a catheter tube precursor (see the first sentence of paragraph 35).

5. Claims 1,6,7,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rourke et al. in U.S. Patent No. 6,312,463 in view of Merdan et al. in U.S. Patent Application Publication No. 20004/0004061 in view of Yamazaki et al. in U.S. Patent No. 5,856,649 and Flanagan in U.S. Patent No. 6,696,667. Rourke et al. discloses laser machining a flat sheet of material to be used as a stent (see column5, line 4). Merdan et al. teaches a method of cutting a stent with a hybrid laser/water jet, that includes impinging the stream on the workpiece so that it fully penetrates the workpiece, and moving the stream relative to the workpiece to from an opening of predetermined shape. Yamazaki et al. teaches a laser cutting method including a step of impinging a beam, along a lead-in path (see figure 6(a) path segment C5-D5). Yamazaki et al. states that a "running piercing" is performed along this path (column 5,lines 15-20). The "running piercing" appears to be the same as applicant's claimed "lead-in path". Yamazaki et al. teaches that the use of running piercing (lead-in path) shortens

machining time. Flanagan teaches moving the workpiece relative to the laser beam for scanning (see column 4,lines 56-67). It would have been obvious to adapt Rourke et al. in view of Merdan et al., Yamazaki et al., and Flanagan to provide a hybrid laser/water jet to more quickly cut the material (workpiece), to also use a lead-in path to increase machining speed, and to move the position of the material so that other parts of the pattern of the stent can be cut into the material.

6. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merdan et al. in view of Yamazaki et al. as applied to claim 17 above, and further in view of Sellar in U.S. Patent No. 5,356,081. Merdan et al. does not disclose whether the laser beam is pulsed or continuous. Sellar teaches using a pulsed laser beam (e.g. see column 3,line 34 and column 8 line 27) in a hybrid laser /water jet cutting apparatus. It would have been obvious to adapt Merdan in view of Yamazaki et al. and Sellar to provide a pulsed laser beam to efficiently cut the workpiece. Please note that claim 22 does not require that the second repetition rate is different from the first repetition rate.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakata et al. in U.S. Patent No. 5,444,211 discloses using a laser beam to pierce a workpiece while it is stationary and then change to machining condition "B" at speed F and then normal cutting conditions (condition "C"). Nakata in U.S. Patent No. 6,100,498 discloses using a laser beam to pierce a workpiece while it is stationary (between time periods t_3 and t_4) and then slowly moving the cutting position until a final cutting speed is reached (see figure 1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571)-272-1292. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

GSE

Geoffrey S. Evans
Primary Examiner
Group 1700